AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A scrolling unit for scrolling incident light, comprising:

a plurality of lens cells arranged on the outer circumferential surface of a column-like plate at identical inclinations with respect to a rotational axis of the scrolling unit;

wherein the plurality of lens cells separate ~~in which at least one lens cell which separates~~ the incident light into a plurality of beams; and ~~is spirally arranged on an outer circumferential surface of a column-like plate,~~

wherein a rotation of the scrolling unit about ~~a predetermined rotating~~the rotational axis simulates a rectilinear motion of a lens array defined by an area of the scrolling unit through which light passes.

2. (original): The scrolling unit of claim 1, wherein the column-like plate is of a drum shape.

3. (currently amended): A scrolling unit for scrolling incident light, in which at least one lens cell which separates the incident light into a plurality of beams is spirally arranged on an outer circumferential surface of a column-like plate,

wherein a rotation of the scrolling unit about a predetermined rotating axis simulates a

rectilinear motion of a lens array defined by an area of the scrolling unit through which light passes, and

~~The scrolling unit of claim 1,~~ wherein a light guide plate is included between first and second surfaces of the scrolling unit through which the incident light passes.

4. (currently amended): A scrolling unit for scrolling incident light, in which at least one lens cell which separates the incident light into a plurality of beams is spirally arranged on an outer circumferential surface of a column-like plate,

wherein a rotation of the scrolling unit about a predetermined rotating axis simulates a rectilinear motion of a lens array defined by an area of the scrolling unit through which light passes, and

~~The scrolling unit of claim 1,~~ wherein a curved light guide plate is installed within the scrolling unit.

5. (cancelled).

6. (currently amended): A projection system comprising:

a light source;

a color separator which separates light emitted from the light source according to color;

a scrolling unit, comprising:

a plurality of lens cells arranged on an outer circumferential surface of a column-

like plate at identical inclinations with respect to a rotational axis of the scrolling unit,

wherein the plurality of lens cells scroll incident light upon the rotation of the scrolling unit about the rotational axis~~which is formed by spirally arranging at least one lens cell on an outer circumferential surface of a column-like plate and which scrolls incident light upon rotation~~ to simulate a rectilinear motion of a lens array defined by an area of the scrolling unit through which light passes; and

a light valve on which a plurality of color beams transmitted by the color separator are incident via the scrolling unit and which processes the color beams according to an input image signal to form a color image.

7. (original): The projection system of claim 6, wherein the color separator includes first, second, and third dichroic filters inclined adjacent to one another at different angles and transmitting or reflecting the incident light according to color, and the scrolling unit is disposed in a light path downstream of the color separator.

8. (currently amended): A projection system comprising:

a light source;

a color separator which separates light emitted from the light source according to color;

a scrolling unit which is formed by spirally arranging at least one lens cell on an outer circumferential surface of a column-like plate and which scrolls incident light upon rotation to simulate a rectilinear motion of a lens array defined by an area of the scrolling unit through

which light passes; and

a light valve on which a plurality of color beams transmitted by the color separator are incident via the scrolling unit and which processes the color beams according to an input image signal to form a color image;

~~The projection system of claim 6,~~ wherein the color separator includes first, second, and third dichroic filters inclined adjacent and parallel to one another and transmitting or reflecting the incident light according to color, and wherein the scrolling unit is disposed in a light path upstream of the color separator.

9. (currently amended): A projection system comprising:

a light source;

a color separator which separates light emitted from the light source according to color;

a scrolling unit which is formed by spirally arranging at least one lens cell on an outer circumferential surface of a column-like plate and which scrolls incident light upon rotation to simulate a rectilinear motion of a lens array defined by an area of the scrolling unit through which light passes; and

a light valve on which a plurality of color beams transmitted by the color separator are incident via the scrolling unit and which processes the color beams according to an input image signal to form a color image;

~~The projection system of claim 6,~~ wherein first and second fly-eye lens arrays are disposed in a light path between the color separator and the light valve.

10. (original): The projection system of claim 9, wherein a first cylindrical lens for reducing the width of a light beam incident upon the scrolling unit is disposed in front of the scrolling unit, and a second cylindrical lens for collimating a light beam transmitted through the scrolling unit is disposed behind the scrolling unit.

11. (original): The projection system of claim 9, wherein a relay lens is disposed in a light path between the second fly-eye lens array and the light valve.

12. (original): The projection system of claim 6, wherein a spatial filter for controlling the divergence angle of light emitted from the light source is disposed in a light path between the light source and the color separator.

13. (original): The projection system of claim 9, wherein a spatial filter for controlling the divergence angle of light emitted from the light source is disposed in a light path between the light source and the color separator.

14. (cancelled).

15. (original): A projection system comprising:

a light source;

a color separator which separates light emitted from the light source according to color;

a scrolling unit which is formed by spirally arranging at least one lens cell on an outer circumferential surface of a column-like plate and which scrolls incident light upon rotation to simulate a rectilinear motion of a lens array defined by an area of the scrolling unit through which light passes;

a light guide plate which is disposed within the scrolling unit and guides light transmitted through the scrolling unit; and

a light valve on which a plurality of color beams obtained by the color separator are incident via the scrolling unit and the light guide plate and which processes the color beams according to an input image signal to form a color image.

16. (original): The projection system of claim 15, wherein the color separator includes first, second, and third dichroic filters inclined adjacent to one another at different angles and transmitting or reflecting the incident light according to color, and the scrolling unit is disposed in a light path downstream of the color separator.

17. (original): The projection system of claim 15, wherein the color separator includes

first, second, and third dichroic filters inclined adjacent and parallel to one another and transmitting or reflecting the incident light according to color, and the scrolling unit is disposed in a light path upstream of the color separator.

18. (original): The projection system of claim 15, wherein first and second cylinder lens arrays have a plurality of cylinder lens cells arranged parallel to one another and are disposed in a light path between the color separator and the light valve.

19. (original): The projection system of claim 18, wherein a direction in which the light guide plate guides light incident upon the scrolling unit is perpendicular to a direction in which the cylinder lens cells are arranged.

20. (original): The projection system of claim 15, wherein the direction in which the light guide plate guides light incident upon the scrolling unit is perpendicular to a direction in which the scrolling unit scrolls light.

21. (original): The projection system of claim 18, wherein a first cylindrical lens for reducing the width of a light beam incident upon the scrolling unit is disposed in front of the scrolling unit, and a second cylindrical lens for collimating a light beam transmitted through the scrolling unit is disposed behind the scrolling unit.

22. (original): The projection system of claim 18, wherein a relay lens is disposed in a light path between the second cylinder lens array and the light valve.

23. (original): The projection system of claim 15, wherein a spatial filter for controlling the divergence angle of light emitted from the light source is disposed on a light path between the light source and the color separator.

24. (original): The projection system of claim 18, wherein a spatial filter for controlling the divergence angle of light emitted from the light source is disposed on a light path between the light source and the color separator.

25. (original): The projection system of claim 15, wherein the light guide plate is curved at a predetermined angle.

26. (original): The projection system of claim 25, wherein the angle is determined so that a lens array defined by an area of the scrolling unit through which light exits via the light guide plate has substantially the same shape of a lens array defined by an area of the scrolling unit through which the light enters.

27. (currently amended): The projection system of claim 15, wherein the at least one lens cell comprises a plurality of lens cells ~~are~~ arranged at an identical inclination with respect to an axis of rotation of the column-like plate on the outer circumferential surface of the column-like plate.

28. (original): The projection system of claim 15, wherein a color scrolling speed depends on a width of a lens cell and the inclination of the lens cell.